Mountain States ACCUTEST LABORATORIES

11/10/11

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg Tank

Accutest Job Number: D28954

Sampling Date: 10/27/11

Report to:

Apex Consulting Services
PO Box 369
Louisville, CO 80027-0369
mhattel@msn.com; sglass@kpk.com

ATTN: Mike Hattel

Total number of pages in report: 26

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6

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Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D28954

Wattenberg Tank

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
D28954-1	10/27/11	15:30	MH	10/27/11	AQ	Water	TANK-1
D28954-1F	10/27/11	15:30	MH	10/27/11	AQ	Water Filtered	TANK-1

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D28954
Site:	Wattenberg Tank	**Report Dat**	11/10/2011 2:16:58 PM

On 10/27/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 1.5 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D28954 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B

Matrix AQ **Batch ID:** MP6139

- All samples were digested and analyzed within the recommended method holding time.
- Sample(s) D28977-3FMS, D28977-3FMSD were used as the QC samples for the metals analysis.
- MP6139-MB1 for Sodium: All sample results >10x method blank concentration.

Wet Chemistry By Method ASTM D287

Matrix ALL **Batch ID:** GN12447

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A

Matrix AQ **Batch ID:** GP5872

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ **Batch ID:** GP5807

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28977-3MS, D28977-3MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate analysis.
- D28954-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D28954-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2540C

Matrix AQ **Batch ID:** GN12272

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28873-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ **Batch ID:** GP5834

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D28899-8DUP, D28899-8MS, D28899-8MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D28954-1	**Date Sampled:**	10/27/11
Matrix:	AQ - Water	**Date Received:**	10/27/11
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	11600	250	mg/l	500	10/28/11 13:11	JML	EPA 300/SW846 9056
HEM Oil and Grease	31.5	5.1	mg/l	1	11/08/11	SWT	EPA 1664A
Nitrogen, Nitrate [a]	< 1.1	1.1	mg/l	25	10/28/11 11:06	JML	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 31	31	mg/l	500	10/28/11 13:11	JML	EPA 300/SW846 9056
Solids, Total Dissolved	18800	10	mg/l	1	11/01/11	JK	SM20 2540C
Specific Gravity by Hydromete	1.0129			1	11/10/11	CJ	ASTM D287
Sulfate	63.8	13	mg/l	25	10/28/11 11:06	JML	EPA 300/SW846 9056
Total Organic Carbon	703	100	mg/l	100	11/02/11 15:42	GH	SM20 5310B
pH	7.11		su	1	10/28/11 10:40	JK	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D28954-1F	**Date Sampled:**	10/27/11
Matrix:	AQ - Water Filtered	**Date Received:**	10/27/11
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	259000	20000	ug/l	5	10/31/11	11/01/11	JB	SW846 6010B [1]	SW846 3010A [2]
Magnesium	45100	10000	ug/l	5	10/31/11	11/01/11	JB	SW846 6010B [1]	SW846 3010A [2]
Potassium	144000	50000	ug/l	5	10/31/11	11/01/11	JB	SW846 6010B [1]	SW846 3010A [2]
Sodium	8170000	20000	ug/l	5	10/31/11	11/01/11	JB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA1936
(2) Prep QC Batch: MP6139

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D28954

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver | State: CO | Zip: 80202-4628
Project Contact: Sherry Glass | sglass@kpk.com
Phone #: 303-825-4822
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: WATTENBERG TANK
Street:
City: Fort Lupton | State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL- Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	H2SO4	H2SO4	NONE	NaHSO4	MEOH	ENCORE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	pH	CATIONS (Ca, K, Mg, NA)	SPECIFIC GRAVITY	TDS	TOC	LAB USE ONLY
	TANK - I		10/27/11	1530	MDH	LIQ	7	X			X					X	X	X	X	X	X	X	01

Turnaround Time (Business days)

- [X] Std. 10 Business Days

Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [x] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] PDF

Comments / Remarks

PDF copy also to Mike Hattel with APEX at mhattel@msn.com

PDF copy also to Sherry Glass with KPK at SGlass@kpk.com

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	MD Hattel	10/27/11 1755	1 Jacob Porter 10/27/11 1755	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal # HD	Preserved where applicable ☒	On Ice ☒ Cooler Temp. 1.5
			5			

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D28954: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D28954 **Client:** K.P. KAUFFMAN INC. **Immediate Client Services Action Required:** No

Date / Time Received: 10/27/2011 5:55:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: WATTENBERG TANK **Airbill #'s:** HD

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

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D28954: Chain of Custody
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Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	18.9	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	5.2	<200
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	111	<1000
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	218	* (a)
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested
(a) All sample results >10x method blank concentration.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/11

Metal	D28977-3F Original MS		Spikelot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron	anr				
Cadmium	anr				
Calcium	72000	91600	25000	110.0	75-125
Chromium	anr				
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	34200	55300	25000	103.6	75-125
Manganese	anr				
Molybdenum					
Nickel					
Phosphorus					
Potassium	0.00	27400	25000	107.3	75-125
Selenium	anr				
Silicon					
Silver					
Sodium	64500	81600	25000	106.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/11

Metal	D28977-3F Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron	anr					
Cadmium	anr					
Calcium	72000	90900	25000	107.2	0.8	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	34200	55100	25000	102.8	0.4	20
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus						
Potassium	0.00	27300	25000	106.9	0.4	20
Selenium	anr					
Silicon						
Silver						
Sodium	64500	80400	25000	101.2	1.5	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 10/31/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron	anr			
Cadmium	anr			
Calcium	27300	25000	109.2	80-120
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	26200	25000	104.8	80-120
Manganese	anr			
Molybdenum				
Nickel				
Phosphorus				
Potassium	26500	25000	106.0	80-120
Selenium	anr			
Silicon				
Silver				
Sodium	26300	25000	105.2	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6139: D28954-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6139
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP5807/GN12243	0.20	0.0	mg/l	20	19.9	99.5	90-110%
Chloride	GP5807/GN12243	0.50	0.22	mg/l	20	19.5	97.5	90-110%
HEM Oil and Grease	GP5872/GN12360	5.0	0.0	mg/l	40	33.6	84.0	78-114%
Nitrogen, Nitrate	GP5807/GN12243	0.045	0.0	mg/l	4.52	4.39	97.2	90-110%
Nitrogen, Nitrite	GP5807/GN12243	0.061	0.0	mg/l	6.09	6.08	99.8	90-110%
Solids, Total Dissolved	GN12272	10	0.0	mg/l	400	394	98.5	90-110%
Sulfate	GP5807/GN12243	0.50	0.0	mg/l	30	28.9	96.3	90-110%
Total Organic Carbon	GP5834/GN12322	1.0	0.0	mg/l	7.2	7.24	100.6	90-110%
pH	GN12230			su	8.00	7.96	99.5	99.3-100

Associated Samples:
Batch GN12230: D28954-1
Batch GN12272: D28954-1
Batch GP5807: D28954-1
Batch GP5834: D28954-1
Batch GP5872: D28954-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP5872/GN12360	mg/l	40	35.5	5.5	20%

Associated Samples:
Batch GP5872: D28954-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN12272	D28873-1	mg/l	756	756	0.0	0-25%
Total Organic Carbon	GP5834/GN12322	D28899-8	mg/l	3.1	2.9	6.7	0-20%

Associated Samples:
Batch GN12272: D28954-1
Batch GP5834: D28954-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP5807/GN12243	D28977-3	mg/l	0.0	12.5	12.4	99.2	80-120%
Chloride	GP5807/GN12243	D28977-3	mg/l	8.2	50	58.3	100.2	80-120%
Nitrogen, Nitrate	GP5807/GN12243	D28977-3	mg/l	1.5	2.83	4.3	99.1	80-120%
Nitrogen, Nitrite	GP5807/GN12243	D28977-3	mg/l	0.0	1.52	1.5	98.5	80-120%
Sulfate	GP5807/GN12243	D28977-3	mg/l	115	50	169	108.0	80-120%
Total Organic Carbon	GP5834/GN12322	D28899-8	mg/l	3.1	10	13.4	103.0	80-120%

Associated Samples:
Batch GP5807: D28954-1
Batch GP5834: D28954-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D28954
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP5807/GN12243	D28977-3	mg/l	0.0	12.5	12.5	0.8	20%
Chloride	GP5807/GN12243	D28977-3	mg/l	8.2	50	58.1	0.3	20%
Nitrogen, Nitrate	GP5807/GN12243	D28977-3	mg/l	1.5	2.83	4.3	0.0	20%
Nitrogen, Nitrite	GP5807/GN12243	D28977-3	mg/l	0.0	1.52	1.5	0.0	20%
Sulfate	GP5807/GN12243	D28977-3	mg/l	115	50	168	0.6	20%
Total Organic Carbon	GP5834/GN12322	D28899-8	mg/l	3.1	10	13.4	0.0	20%

Associated Samples:
Batch GP5807: D28954-1
Batch GP5834: D28954-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Mountain States ACCUTEST LABORATORIES

12/06/11

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg Tank

PO# 7591

Accutest Job Number: D29699

Sampling Date: 11/22/11

Report to:

Apex Consulting Services
PO Box 369
Louisville, CO 80027-0369
mhattel@msn.com; kgilbert@kpk.com

ATTN: Mike Hattel

Total number of pages in report: 26

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6

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Accutest Laboratories

Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D29699

Wattenberg Tank
Project No: PO# 7591

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D29699-1	11/22/11	12:00	MH	11/22/11	AQ	Water	TANK-1
D29699-1F	11/22/11	12:00	MH	11/22/11	AQ	Water Filtered	TANK-1

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D29699
Site:	Wattenberg Tank	**Report Dat**	12/6/2011 12:50:00 PM

On 11/22/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.1 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D29699 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Metals By Method SW846 6010B

Matrix AQ **Batch ID:** MP6352

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29739-1MS, D29739-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method ASTM D287

Matrix ALL **Batch ID:** GN12751

- The data for ASTM D287 meets quality control requirements.

Wet Chemistry By Method EPA 1664A

Matrix AQ **Batch ID:** GP6040

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ **Batch ID:** GP6005

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29711-1MS, D29711-1MSD were used as the QC samples for the anions analysis.
- D29699-1 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D29699-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2540C

Matrix AQ **Batch ID:** GN12659

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29674-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix AQ **Batch ID:** GP6057

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29825-3DUP, D29826-2MS, D29826-2MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D29699-1	**Date Sampled:**	11/22/11
Matrix:	AQ - Water	**Date Received:**	11/22/11
		Percent Solids:	n/a
Project:	Wattenberg Tank		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chloride	11700	250	mg/l	500	11/23/11 12:34	JML	EPA 300/SW846 9056
HEM Oil and Grease	15.7	5.3	mg/l	1.058201	12/02/11	SWT	EPA 1664A
Nitrogen, Nitrate [a]	< 1.1	1.1	mg/l	25	11/23/11 10:28	JML	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 31	31	mg/l	500	11/23/11 12:34	JML	EPA 300/SW846 9056
Solids, Total Dissolved	20200	10	mg/l	1	11/28/11	JK	SM20 2540C
Specific Gravity by Hydromete	1.0151			1	12/02/11	CJ	ASTM D287
Sulfate	26.0	13	mg/l	25	11/23/11 10:28	JML	EPA 300/SW846 9056
Total Organic Carbon	436	25	mg/l	25	12/05/11 12:16	JML	SM20 5310B
pH	7.23		su	1	11/22/11 15:30	JK	SM20 4500H

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	TANK-1		
Lab Sample ID:	D29699-1F	**Date Sampled:**	11/22/11
Matrix:	AQ - Water Filtered	**Date Received:**	11/22/11
		Percent Solids:	n/a
Project:	Wattenberg Tank		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	248000	20000	ug/l	50	11/28/11	11/30/11	JB	SW846 6010B [1]	SW846 3010A [2]
Magnesium	37500	10000	ug/l	50	11/28/11	11/30/11	JB	SW846 6010B [1]	SW846 3010A [2]
Potassium	201000	50000	ug/l	50	11/28/11	11/30/11	JB	SW846 6010B [1]	SW846 3010A [2]
Sodium	8230000	20000	ug/l	50	11/28/11	11/30/11	JB	SW846 6010B [1]	SW846 3010A [2]

(1) Instrument QC Batch: MA2011
(2) Prep QC Batch: MP6352

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D29699

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: KENT GILBERT ~~Sherry Glass~~ ~~sglass@kpk.com~~ kgilbert@kpk.com
Phone #: 303-825-4822
Samplers's Name: MICHAEL HATTEL (303-665-1400)

Project Information

Project Name: WATTENBERG TANK
Street:
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	pH	CATIONS (Ca, K, Mg, NA)	SPECIFIC GRAVITY	TDS	TOC	LAB USE ONLY
	TANK - I		11/22/11	1200	MDH	LIQ	7	X			X					X	X	X	X	X	X	X	01

Turnaround Time (Business days)

[X] Std. 10 Business Days — Approved By:/ Date:
[ ]
[ ]
[ ]
[ ]
[ ]

Emergency T/A data available VIA Lablink

Data Deliverable Information

[ ] Commercial "A" [ ] FULL CLP
[ ] Commercial "B" [ ] NYASP Category A
[ ] NJ Reduced [ ] NYASP Category B
[ ] NJ Full [ ] State Forms
[X] Hard Copy [X] PDF

Comments / Remarks

PDF copy also to Mike Hattel with APEX at mhattel@msn.com
PDF copy also to ~~Sherry Glass~~ Kent Gilbert kgilbert@kpk.com with KPK at ~~SGlass@kpk.com~~

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		11/22/11 1315		2		2
3				4		4
5				Custody Seal #	Preserved where applicable	On Ice / Cooler Temp.
				HD		2.1

D29699: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D29699 **Client:** K.P. KAUFFMAN COMPANY INC. **Immediate Client Services Action Required:** No

Date / Time Received: 11/22/2011 1:15:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: WATTENBERG TANK **Airbill #'s:** HD

Cooler Security	Y	N		Y	N
1. Custody Seals Present:	☑	☐	3. COC Present:	☑	☐
2. Custody Seals Intact:	☑	☐	4. Smpl Dates/Time OK	☑	☐

Cooler Temperature	Y	N
1. Temp criteria achieved:	☑	☐
2. Cooler temp verification:	Infared gun	
3. Cooler media:	Ice (bag)	

Quality Control Preservation	Y	N	N/A
1. Trip Blank present / cooler:	☐	☐	
2. Trip Blank listed on COC:	☐	☐	
3. Samples preserved properly:	☑	☐	
4. VOCs headspace free:	☐	☐	☑

Sample Integrity - Documentation	Y	N
1. Sample labels present on bottles:	☑	☐
2. Container labeling complete:	☑	☐
3. Sample container label / COC agree:	☑	☐

Sample Integrity - Condition	Y	N
1. Sample recvd within HT:	☑	☐
2. All containers accounted for:	☑	☐
3. Condition of sample:	Intact	

Sample Integrity - Instructions	Y	N	N/A
1. Analysis requested is clear:	☑	☐	
2. Bottles received for unspecified tests	☐	☑	
3. Sufficient volume rec'd for analysis:	☑	☐	
4. Compositing instructions clear:	☐	☐	☑
5. Filtering instructions clear:	☐	☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

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D29699: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	11.3	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	3.3	<200
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	-28	<1000
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	13.0	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	D29739-1 Original	MS	Spikelot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium	113000	138000	25000	100.0	75-125
Chromium	anr				
Cobalt					
Copper					
Iron	anr				
Lead	anr				
Lithium					
Magnesium	49600	73900	25000	97.2	75-125
Manganese	anr				
Molybdenum					
Nickel					
Phosphorus					
Potassium	3080	29400	25000	105.3	75-125
Selenium	anr				
Silicon					
Silver	anr				
Sodium	435000	455000	25000	80.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	D29739-1 Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium	113000	140000	25000	108.0	1.4	20
Chromium	anr					
Cobalt						
Copper						
Iron	anr					
Lead	anr					
Lithium						
Magnesium	49600	74500	25000	99.6	0.8	20
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus						
Potassium	3080	29400	25000	105.3	0.0	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	435000	456000	25000	84.0	0.2	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/28/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	26700	25000	106.8	80-120
Chromium	anr			
Cobalt				
Copper				
Iron	anr			
Lead	anr			
Lithium				
Magnesium	24400	25000	97.6	80-120
Manganese	anr			
Molybdenum				
Nickel				
Phosphorus				
Potassium	25200	25000	100.8	80-120
Selenium	anr			
Silicon				
Silver	anr			
Sodium	24600	25000	98.4	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6352: D29699-1F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

QC Batch ID: MP6352
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP6005/GN12657	0.20	0.0	mg/l	20	19.2	96.0	90-110%
Chloride	GP6005/GN12657	0.50	0.27	mg/l	20	19.7	98.5	90-110%
HEM Oil and Grease	GP6040/GN12728	5.0	0.0	mg/l	40	35.0	87.5	78-114%
Nitrogen, Nitrate	GP6005/GN12657	0.045	0.0	mg/l	4.52	4.32	95.6	90-110%
Nitrogen, Nitrite	GP6005/GN12657	0.061	0.0	mg/l	6.09	6.23	102.3	90-110%
Solids, Total Dissolved	GN12659	10	0.0	mg/l	400	403	100.8	90-110%
Sulfate	GP6005/GN12657	0.50	0.0	mg/l	30	29.0	96.7	90-110%
Total Organic Carbon	GP6057/GN12769	1.0	0.0	mg/l	7.2	7.45	103.5	90-110%
pH	GN12643			su	8.00	7.96	99.5	99.3-100

Associated Samples:
Batch GN12643: D29699-1
Batch GN12659: D29699-1
Batch GP6005: D29699-1
Batch GP6040: D29699-1
Batch GP6057: D29699-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP6040/GN12728	mg/l	40	33.4	4.7	20%

Associated Samples:
Batch GP6040: D29699-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Solids, Total Dissolved	GN12659	D29674-1	mg/l	92.0	96.0	4.3	0-25%
Total Organic Carbon	GP6057/GN12769	D29825-3	mg/l	6.1	6.2	1.6	0-20%

Associated Samples:
Batch GN12659: D29699-1
Batch GP6057: D29699-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP6005/GN12657	D29711-1	mg/l	0.20	2.5	2.5	92.0	80-120%
Chloride	GP6005/GN12657	D29711-1	mg/l	12.0	10	21.6	96.0	80-120%
Nitrogen, Nitrate	GP6005/GN12657	D29711-1	mg/l	0.0	0.565	0.52	92.0	80-120%
Nitrogen, Nitrite	GP6005/GN12657	D29711-1	mg/l	0.0	0.305	0.30	98.5	80-120%
Sulfate	GP6005/GN12657	D29711-1	mg/l	179	100	272	93.0	80-120%
Total Organic Carbon	GP6057/GN12769	D29826-2	mg/l	3.1	10	14.1	110.0	80-120%

Associated Samples:
Batch GP6005: D29699-1
Batch GP6057: D29699-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29699
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg Tank

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP6005/GN12657	D29711-1	mg/l	0.20	2.5	2.6	3.9	20%
Chloride	GP6005/GN12657	D29711-1	mg/l	12.0	10	21.6	0.0	20%
Nitrogen, Nitrate	GP6005/GN12657	D29711-1	mg/l	0.0	0.565	0.53	1.9	20%
Nitrogen, Nitrite	GP6005/GN12657	D29711-1	mg/l	0.0	0.305	0.29	3.4	20%
Sulfate	GP6005/GN12657	D29711-1	mg/l	179	100	279	2.5	20%
Total Organic Carbon	GP6057/GN12769	D29826-2	mg/l	3.1	10	13.8	2.2	20%

Associated Samples:
Batch GP6005: D29699-1
Batch GP6057: D29699-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

Mountain States ACCUTEST LABORATORIES

01/09/12

Technical Report for

K.P. Kauffmann Company, Inc.

Wattenberg GW

PO# 7591

Accutest Job Number: D30535

Sampling Date: 12/21/11

Report to:

K.P. Kauffmann Company, Inc
1675 Broadway Suite 2800
Denver, CO 80202-4628
sglass@kpk.com; mhattel@msn.com

ATTN: Sherry Glass

Total number of pages in report: 40

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Brad Madadian
Laboratory Director

Client Service contact: Shea Greiner 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7

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Accutest Laboratories

Sample Summary

K.P. Kauffmann Company, Inc.

Job No: D30535

Wattenberg GW
Project No: PO# 7591

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D30535-1	12/21/11	08:00	MH	12/21/11	AQ	Ground Water	OW-1
D30535-1F	12/21/11	08:00	MH	12/21/11	AQ	Groundwater Filtered	OW-1
D30535-2	12/21/11	08:55	MH	12/21/11	AQ	Ground Water	OW-2
D30535-2F	12/21/11	08:55	MH	12/21/11	AQ	Groundwater Filtered	OW-2
D30535-3	12/21/11	09:55	MH	12/21/11	AQ	Ground Water	OW-3
D30535-3F	12/21/11	09:55	MH	12/21/11	AQ	Groundwater Filtered	OW-3
D30535-4	12/21/11	11:00	MH	12/21/11	AQ	Ground Water	OW-4
D30535-4F	12/21/11	11:00	MH	12/21/11	AQ	Groundwater Filtered	OW-4

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	K.P. Kauffmann Company, Inc.	**Job No**	D30535
Site:	Wattenberg GW	**Report Date**	1/9/2012 9:01:07 AM

On 12/21/2011, 4 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D30535 was assigned to the project. The lab sample IDs, client sample IDs, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GC By Method SW846 8021B

Matrix AQ **Batch ID:** GTB816

- All samples were analyzed within the recommended method holding time.
- Sample(s) D30425-2MS, D30425-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010B

Matrix AQ **Batch ID:** MP6540

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30545-1MS, D30545-1MSD were used as the QC samples for the metals analysis.

Wet Chemistry By Method EPA 1664A

Matrix AQ **Batch ID:** GP6223

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method EPA 300/SW846 9056

Matrix AQ **Batch ID:** GP6171

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D25282-8MS, D25282-8MSD were used as the QC samples for the Chloride, Nitrogen, Nitrate, Nitrogen, Nitrite, Sulfate, Chloride analysis.
- D30535-1, D30535-2, D30535-3, and D30535-4 for Nitrogen, Nitrite: Elevated detection limit due to matrix interference.
- D30535-1 for Nitrogen, Nitrate: Elevated detection limit due to matrix interference.

Wet Chemistry By Method SM20 2320B

Matrix	AQ	Batch ID:	GN13081

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30551-1DUP, D30551-1MS, D30551-1MSD were used as the QC samples for the Alkalinity, Total as CaCO3 analysis.

Matrix	AQ	Batch ID:	GN13085

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix	AQ	Batch ID:	GN13086

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Wet Chemistry By Method SM20 2540C

Matrix	AQ	Batch ID:	GN13041

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30535-1DUP were used as the QC samples for the Solids, Total Dissolved analysis.

Wet Chemistry By Method SM20 5310B

Matrix	AQ	Batch ID:	GP6210

- All samples were prepared and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D30425-4DUP, D30535-1MS, D30535-1MSD were used as the QC samples for the Total Organic Carbon analysis.

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	D30535-1	**Date Sampled:**	12/21/11
Matrix:	AQ - Ground Water	**Date Received:**	12/21/11
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14450.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.0	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	104%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID: OW-1
Lab Sample ID: D30535-1
Matrix: AQ - Ground Water
Project: Wattenberg GW

Date Sampled: 12/21/11
Date Received: 12/21/11
Percent Solids: n/a

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	803	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	803	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	4150	100	mg/l	200	12/21/11 18:57	GH	EPA 300/SW846 9056
HEM Oil and Grease	10.3	5.6	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate [a]	< 0.90	0.90	mg/l	20	12/21/11 14:05	GH	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 6.1	6.1	mg/l	100	12/21/11 18:43	GH	EPA 300/SW846 9056
Solids, Total Dissolved	10100	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	1660	50	mg/l	100	12/21/11 18:43	GH	EPA 300/SW846 9056
Total Organic Carbon	34.5	2.0	mg/l	2	12/29/11 15:44	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-1		
Lab Sample ID:	D30535-1F	**Date Sampled:**	12/21/11
Matrix:	AQ - Groundwater Filtered	**Date Received:**	12/21/11
		Percent Solids:	n/a
Project:	Wattenberg GW		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	427000	400	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Magnesium	407000	200	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Potassium	11900	1000	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Sodium	2530000	4000	ug/l	10	12/23/11	12/28/11	JB	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA2075
(2) Instrument QC Batch: MA2082
(3) Prep QC Batch: MP6540

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	OW-2		
Lab Sample ID:	D30535-2	**Date Sampled:**	12/21/11
Matrix:	AQ - Ground Water	**Date Received:**	12/21/11
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14451.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	0.25	1.0	0.20	ug/l	J
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	96%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-2		
Lab Sample ID:	D30535-2	**Date Sampled:**	12/21/11
Matrix:	AQ - Ground Water	**Date Received:**	12/21/11
		Percent Solids:	n/a
Project:	Wattenberg GW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	986	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	986	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	4740	200	mg/l	400	12/21/11 19:25	GH	EPA 300/SW846 9056
HEM Oil and Grease	12.8	5.0	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate	8.8	0.90	mg/l	20	12/21/11 14:19	GH	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 6.1	6.1	mg/l	100	12/21/11 19:11	GH	EPA 300/SW846 9056
Solids, Total Dissolved	16800	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	5270	200	mg/l	400	12/21/11 19:25	GH	EPA 300/SW846 9056
Total Organic Carbon	46.4	2.0	mg/l	2	12/29/11 15:57	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-2		
Lab Sample ID:	D30535-2F	**Date Sampled:**	12/21/11
Matrix:	AQ - Groundwater Filtered	**Date Received:**	12/21/11
		Percent Solids:	n/a
Project:	Wattenberg GW		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	568000	400	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Magnesium	682000	200	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Potassium	19900	1000	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Sodium	4050000	4000	ug/l	10	12/23/11	12/28/11	JB	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA2075
(2) Instrument QC Batch: MA2082
(3) Prep QC Batch: MP6540

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-3		
Lab Sample ID:	D30535-3	**Date Sampled:**	12/21/11
Matrix:	AQ - Ground Water	**Date Received:**	12/21/11
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14452.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	1.3	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	95%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-3		
Lab Sample ID:	D30535-3	**Date Sampled:**	12/21/11
Matrix:	AQ - Ground Water	**Date Received:**	12/21/11
		Percent Solids:	n/a
Project:	Wattenberg GW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	988	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	988	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	3650	200	mg/l	400	12/21/11 19:53	GH	EPA 300/SW846 9056
HEM Oil and Grease	7.3	5.8	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate	4.1	0.90	mg/l	20	12/21/11 14:33	GH	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 6.1	6.1	mg/l	100	12/21/11 19:39	GH	EPA 300/SW846 9056
Solids, Total Dissolved	15500	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	5620	200	mg/l	400	12/21/11 19:53	GH	EPA 300/SW846 9056
Total Organic Carbon	45.9	2.0	mg/l	2	12/29/11 16:08	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-3		
Lab Sample ID:	D30535-3F	**Date Sampled:**	12/21/11
Matrix:	AQ - Groundwater Filtered	**Date Received:**	12/21/11
		Percent Solids:	n/a
Project:	Wattenberg GW		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	455000	400	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Magnesium	596000	2000	ug/l	10	12/23/11	12/28/11	JB	SW846 6010B [2]	SW846 3010A [3]
Potassium	18000	10000	ug/l	10	12/23/11	12/28/11	JB	SW846 6010B [2]	SW846 3010A [3]
Sodium	3960000	4000	ug/l	10	12/23/11	12/28/11	JB	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA2075
(2) Instrument QC Batch: MA2082
(3) Prep QC Batch: MP6540

RL = Reporting Limit

Accutest Laboratories

Report of Analysis

Client Sample ID:	OW-4		
Lab Sample ID:	D30535-4	**Date Sampled:**	12/21/11
Matrix:	AQ - Ground Water	**Date Received:**	12/21/11
Method:	SW846 8021B	**Percent Solids:**	n/a
Project:	Wattenberg GW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	TB14453.D	1	12/28/11	SK	n/a	n/a	GTB816
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	97%		60-140%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OW-4		
Lab Sample ID:	D30535-4	**Date Sampled:**	12/21/11
Matrix:	AQ - Ground Water	**Date Received:**	12/21/11
		Percent Solids:	n/a
Project:	Wattenberg GW		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Alkalinity, Bicarbonate as CaC	322	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Carbonate	< 5.0	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Alkalinity, Total as CaCO3	322	5.0	mg/l	1	12/30/11	JD	SM20 2320B
Chloride	3430	200	mg/l	400	12/21/11 20:21	GH	EPA 300/SW846 9056
HEM Oil and Grease	8.1	6.2	mg/l	1	01/04/12	SWT	EPA 1664A
Nitrogen, Nitrate	69.9	4.5	mg/l	100	12/21/11 20:07	GH	EPA 300/SW846 9056
Nitrogen, Nitrite [a]	< 6.1	6.1	mg/l	100	12/21/11 20:07	GH	EPA 300/SW846 9056
Solids, Total Dissolved	17100	10	mg/l	1	12/27/11	JK	SM20 2540C
Sulfate	7210	200	mg/l	400	12/21/11 20:21	GH	EPA 300/SW846 9056
Total Organic Carbon	73.8	5.0	mg/l	5	12/29/11 16:21	NS	SM20 5310B

(a) Elevated detection limit due to matrix interference.

RL = Reporting Limit

Report of Analysis

Client Sample ID:	OW-4		
Lab Sample ID:	D30535-4F	**Date Sampled:**	12/21/11
Matrix:	AQ - Groundwater Filtered	**Date Received:**	12/21/11
		Percent Solids:	n/a
Project:	Wattenberg GW		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Calcium	507000	400	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Magnesium	578000	200	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Potassium	22000	1000	ug/l	1	12/23/11	12/23/11	JB	SW846 6010B [1]	SW846 3010A [3]
Sodium	3910000	4000	ug/l	10	12/23/11	12/28/11	JB	SW846 6010B [2]	SW846 3010A [3]

(1) Instrument QC Batch: MA2075
(2) Instrument QC Batch: MA2082
(3) Prep QC Batch: MP6540

RL = Reporting Limit

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST Laboratories

4036 Youngfield St., Wheat Ridge, CO 80033
303-425-6021 FAX: 303-425-6854

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D30535

Client / Reporting Information

Company Name: K.P. Kauffman Company, Inc.
Address: 1675 Broadway, Suite 2800
City: Denver State: CO Zip: 80202-4628
Project Contact: MICHAEL HATTEL mhattel@msn.com
Phone #: 303-665-1400
Samplers's Name: MICHAEL HATTEL

Project Information

Project Name: WATTENBERG GROUNDWATER
Street:
City: Fort Lupton State: CO
Project #:
Fax #:
Client Purchase Order #: 7591

Requested Analysis

Matrix Codes

DW- Drinking Water
GW- Ground Water
WW- Water
SW- Surface Water
SO- Soil
SL-Sludge
OI-Oil
LIQ- Other Liquid
AIR- Air
SOL-Other Solid
WP-Wipe

Accutest Sample #	Field ID / Point of Collection	SUMMA # / MEOH Vial #	Collection Date	Time	Sampled by	Matrix	# of bottles	Number of preserved Bottles: HCl	NaOH	HNO3	H2SO4	NONE	NaHSO4	MEOH	ENCORE	OIL & GREASE 1664	ANIONS (NITRATE, NITRITE, SULFATE, CHLORIDE)	TOC	CATIONS (Ca, K, Mg, NA)	BTEX 8021	ALKALINITY (CARB/BICARB)	TDS	LAB USE ONLY
	OW-1		12/21/11	0800	MDH	GW	9	X			X					X	X	X	X	X	X	X	01
	OW-2			0855	MDH	GW	9	X			X					X	X	X	X	X	X	X	02
	OW-3			0955	MDH	GW	9	X			X					X	X	X	X	X	X	X	03
	OW-4			1100	MDH	GW	9	X			X					X	X	X	X	X	X	X	04
																							05 TD
																							12/21/11

Turnaround Time (Business days)

- [X] Std. 10 Business Days
- [ ]
- [ ]
- [ ]
- [ ]
- [ ]

Approved By:/ Date:

Emergency T/A data available VIA Lablink

Data Deliverable Information

- [ ] Commercial "A"
- [ ] Commercial "B"
- [ ] NJ Reduced
- [ ] NJ Full
- [x] Hard Copy
- [ ] FULL CLP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [x] PDF

Comments / Remarks

PDF copy to Kent Gilbert with KPK at kgilbert@kpk.com

PDF copy also to Mike Hattel with APEX at mhattel@msn.com

Hard copy ALSO to Mike Hattel with APEX, P.O. Box 369,

Louisville, CO 80027-0389 TB 10/26/11 12/21/11

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		12/21/11 1245	1 Jacob Baker 12/21/11 1245	2		2
3			3	4		4
5			5	Custody Seal # HD	Preserved where applicable X	On Ice X Cooler Temp. 4.0

only received one O&G bottle for Sample # 3 and 4 (TB) 12/21/11

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D30535 **Client:** K.P.KAUFFMAN COMPANY INC. **Immediate Client Services Action Required:** No

Date / Time Received: 12/21/2011 12:45:00 P **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: WATTERBERG GROUNDWATER **Airbill #'s:** HD

Cooler Security

	Y or N		Y or N
1. Custody Seals Present:	☑ ☐	3. COC Present:	☑ ☐
2. Custody Seals Intact:	☑ ☐	4. Smpl Dates/Time OK	☑ ☐

Cooler Temperature

	Y or N
1. Temp criteria achieved:	☑ ☐
2. Cooler temp verification:	Infared gun
3. Cooler media:	Ice (bag)

Quality Control Preservation

	Y or N	N/A
1. Trip Blank present / cooler:	☑ ☐	
2. Trip Blank listed on COC:	☑ ☐	
3. Samples preserved properly:	☑ ☐	
4. VOCs headspace free:	☑ ☐	☐

Sample Integrity - Documentation

	Y or N
1. Sample labels present on bottles:	☑ ☐
2. Container labeling complete:	☑ ☐
3. Sample container label / COC agree:	☑ ☐

Sample Integrity - Condition

	Y or N
1. Sample recvd within HT:	☑ ☐
2. All containers accounted for:	☑ ☐
3. Condition of sample:	Intact

Sample Integrity - Instructions

	Y or N	N/A
1. Analysis requested is clear:	☑ ☐	
2. Bottles received for unspecified tests	☐ ☑	
3. Sufficient volume rec'd for analysis:	☑ ☐	
4. Compositing instructions clear:	☐ ☐	☑
5. Filtering instructions clear:	☐ ☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021

4036 Youngfield Street
F: (303) 425-6854

Wheat Ridge, CO
www/accutest.com

4.1

4

D30535: Chain of Custody
Page 2 of 2

Mountain States ACCUTEST LABORATORIES

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D30535
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB816-MB	TB14433.D	1	12/28/11	SK	n/a	n/a	GTB816

The QC reported here applies to the following samples: **Method:** SW846 8021B

D30535-1, D30535-2, D30535-3, D30535-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	1.0	0.20	ug/l	
100-41-4	Ethylbenzene	ND	2.0	1.0	ug/l	
108-88-3	Toluene	ND	2.0	1.0	ug/l	
1330-20-7	Xylenes (total)	ND	2.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
120-82-1	1,2,4-Trichlorobenzene	107%	60-140%

Blank Spike Summary

Job Number: D30535
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GTB816-BS	TB14434.D	1	12/28/11	SK	n/a	n/a	GTB816

The QC reported here applies to the following samples: **Method:** SW846 8021B

D30535-1, D30535-2, D30535-3, D30535-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	27.2	29.1	107	70-130
100-41-4	Ethylbenzene	45.6	47.3	104	70-130
108-88-3	Toluene	212	206	97	70-130
1330-20-7	Xylenes (total)	216	238	110	68-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	116%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D30535
Account: KPKCOD K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D30425-2MS	TB14436.D	1	12/28/11	SK	n/a	n/a	GTB816
D30425-2MSD	TB14437.D	1	12/28/11	SK	n/a	n/a	GTB816
D30425-2	TB14435.D	1	12/28/11	SK	n/a	n/a	GTB816

The QC reported here applies to the following samples: **Method:** SW846 8021B

D30535-1, D30535-2, D30535-3, D30535-4

CAS No.	Compound	D30425-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	99.4		27.2	128	105	133	124	4	67-130/30
100-41-4	Ethylbenzene	7.0		45.6	40.6	74	40.8	74	0	62-130/30
108-88-3	Toluene	73.4		212	216	67	218	68	1	66-130/30
1330-20-7	Xylenes (total)	38.4		216	209	79	210	79	0	61-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D30425-2	Limits
120-82-1	1,2,4-Trichlorobenzene	108%	99%	106%	60-140%

Mountain States ACCUTEST LABORATORIES

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	100	5.9	5.9		
Antimony	30	3.1	3.1		
Arsenic	25	5.9	5.9		
Barium	10	1.1	1.1		
Beryllium	10	.44	.5		
Boron	50	4.8	4.8		
Cadmium	10	.27	.27		
Calcium	400	9.6	15	48.8	<400
Chromium	10	.18	.79		
Cobalt	5.0	.35	.35		
Copper	10	.85	2.8		
Iron	70	3.4	13		
Lead	50	1.6	2.1		
Lithium	2.0	.28	1.2		
Magnesium	200	5.8	10	2.1	<200
Manganese	5.0	.053	.31		
Molybdenum	10	.45	.87		
Nickel	30	.43	1		
Phosphorus	100	11	20		
Potassium	1000	55	55	24.7	<1000
Selenium	50	3.8	3.8		
Silicon	50	3.8	3.8		
Silver	30	.18	.31		
Sodium	400	110	110	95.3	<400
Strontium	5.0		.25		
Thallium	10	2.9	2.9		
Tin	50	5.5	9.9		
Titanium	10	.11	.31		
Uranium	50	1.5	3.5		
Vanadium	10	.16	.22		
Zinc	30	.28	1.8		

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	D30545-1 Original	MS	Spikelot MPICPALL	% Rec	QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	anr				
Beryllium					
Boron					
Cadmium	anr				
Calcium	127000	152000	25000	100.0	75-125
Chromium	anr				
Cobalt					
Copper	anr				
Iron	anr				
Lead	anr				
Lithium					
Magnesium	24900	50600	25000	102.8	75-125
Manganese	anr				
Molybdenum					
Nickel					
Phosphorus					
Potassium	9160	37100	25000	111.8	75-125
Selenium	anr				
Silicon					
Silver	anr				
Sodium	124000	150000	25000	104.0	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	D30545-1 Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	anr					
Beryllium						
Boron						
Cadmium	anr					
Calcium	127000	152000	25000	100.0	0.0	20
Chromium	anr					
Cobalt						
Copper	anr					
Iron	anr					
Lead	anr					
Lithium						
Magnesium	24900	50200	25000	101.2	0.8	20
Manganese	anr					
Molybdenum						
Nickel						
Phosphorus						
Potassium	9160	36700	25000	110.2	1.1	20
Selenium	anr					
Silicon						
Silver	anr					
Sodium	124000	149000	25000	100.0	0.7	20
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

6.1.2
6

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/23/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	anr			
Beryllium				
Boron				
Cadmium	anr			
Calcium	26200	25000	104.8	80-120
Chromium	anr			
Cobalt				
Copper	anr			
Iron	anr			
Lead	anr			
Lithium				
Magnesium	26200	25000	104.8	80-120
Manganese	anr			
Molybdenum				
Nickel				
Phosphorus				
Potassium	27300	25000	109.2	80-120
Selenium	anr			
Silicon				
Silver	anr			
Sodium	27000	25000	108.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6540: D30535-1F, D30535-2F, D30535-3F, D30535-4F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

QC Batch ID: MP6540
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

Mountain States ACCUTEST LABORATORIES

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Alkalinity, Bicarbonate as CaC	GN13085	5.0	0.0	mg/l	100	102	102.1	90-110%
Alkalinity, Carbonate	GN13086	5.0	0.0	mg/l	100	102	102.1	80-120%
Alkalinity, Total as CaCO3	GN13081	5.0	0.0	mg/l	100	102	102.1	90-110%
Chloride	GP6171/GN13001	0.50	0.0	mg/l	20	19.8	99.0	90-110%
HEM Oil and Grease	GP6223/GN13093	5.0	0.0	mg/l	40	38.3	95.8	78-114%
Nitrogen, Nitrate	GP6171/GN13001	0.045	0.0	mg/l	4.52	4.41	97.6	90-110%
Nitrogen, Nitrite	GP6171/GN13001	0.061	0.0	mg/l	6.09	6.56	107.7	90-110%
Solids, Total Dissolved	GN13041	10	0.0	mg/l	400	400	100.0	90-110%
Sulfate	GP6171/GN13001	0.50	0.0	mg/l	30	28.9	96.3	90-110%
Total Organic Carbon	GP6210/GN13082	1.0	0.0	mg/l	7.2	7.40	102.8	90-110%

Associated Samples:
Batch GN13041: D30535-1, D30535-2, D30535-3, D30535-4
Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4
Batch GN13085: D30535-1, D30535-2, D30535-3, D30535-4
Batch GN13086: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6171: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6223: D30535-1, D30535-2, D30535-3, D30535-4
(*) Outside of QC limits

7.1
7

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
HEM Oil and Grease	GP6223/GN13093	mg/l	40	36.6	4.5	20%

Associated Samples:
Batch GP6223: D30535-1, D30535-2, D30535-3, D30535-4
(*) Outside of QC limits

7.2
7

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Alkalinity, Total as CaCO3	GN13081	D30551-1	mg/l	306	315	3.0	0-20%
Solids, Total Dissolved	GN13041	D30535-1	mg/l	10100	10100	0.0	0-25%
Total Organic Carbon	GP6210/GN13082	D30425-4	mg/l	158	158	0.0	0-20%

Associated Samples:
Batch GN13041: D30535-1, D30535-2, D30535-3, D30535-4
Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4
(*) Outside of QC limits

7.3
7

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Alkalinity, Total as CaCO3	GN13081	D30551-1	mg/l	306	100	407	100.8	80-120%
Chloride	GP6171/GN13001	D25282-8	mg/l	201	100	309	108.0	80-120%
Nitrogen, Nitrate	GP6171/GN13001	D25282-8	mg/l	11.0	28.3	38.4	97.0	80-120%
Nitrogen, Nitrite	GP6171/GN13001	D25282-8	mg/l	0.0	3.05	3.1	101.8	80-120%
Sulfate	GP6171/GN13001	D25282-8	mg/l	574	500	1050	95.2	80-120%
Total Organic Carbon	GP6210/GN13082	D30535-1	mg/l	34.5	50	82.0	95.0	80-120%

Associated Samples:
Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6171: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

7.4
7

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D30535
Account: KPKCOD - K.P. Kauffmann Company, Inc.
Project: Wattenberg GW

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Alkalinity, Total as CaCO3	GN13081	D30551-1	mg/l	306	100	409	0.6	20%
Chloride	GP6171/GN13001	D25282-8	mg/l	201	100	309	0.0	20%
Nitrogen, Nitrate	GP6171/GN13001	D25282-8	mg/l	11.0	28.3	38.5	0.3	20%
Nitrogen, Nitrite	GP6171/GN13001	D25282-8	mg/l	0.0	3.05	3.1	0.0	20%
Sulfate	GP6171/GN13001	D25282-8	mg/l	574	500	1050	0.0	20%
Total Organic Carbon	GP6210/GN13082	D30535-1	mg/l	34.5	50	81.7	0.4	20%

Associated Samples:
Batch GN13081: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6171: D30535-1, D30535-2, D30535-3, D30535-4
Batch GP6210: D30535-1, D30535-2, D30535-3, D30535-4
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

7.5
7